



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/626,303	07/23/2003	T. William Hutchens	016866-002340US	1931

20350 7590 11/02/2005

TOWNSEND AND TOWNSEND AND CREW, LLP
TWO EMBARCADERO CENTER
EIGHTH FLOOR
SAN FRANCISCO, CA 94111-3834

EXAMINER

VENCI, DAVID J

ART UNIT PAPER NUMBER

1641

DATE MAILED: 11/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/626,303	Applicant(s) HUTCHENS ET AL.	
	Examiner David J. Venci	Art Unit 1641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on August 22, 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 32-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 32-40 is/are allowed.
- 6) ☒ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1641

DETAILED ACTION

Examiner acknowledges Applicants' reply, filed August 22, 2005. Currently, claims 32-40 are under examination.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

Claim 33 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 33, the recitation of "one linear axis" lacks antecedent basis. Whether "one linear axis" references a "linear axis of the probe" recited in claim 32 is not clear.

Art Unit: 1641

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 32-33 and 39-40 are rejected under 35 U.S.C. 102(b) as being anticipated by Zare et al. (US 4,988,897).

Zare et al. describe a probe comprising a substrate (see Fig. 7, metallic clamp 301) having a flat surface (see Fig. 7, inorganic oxide carrier 701), and an adsorbent (see col. 8, lines 61-68, "inorganic oxidic material... glass, fused silica... silica-alumina... titania"; see col. 7, lines 49-62) bound to the surface (see col. 9, line 4, "skin... layer"), the adsorbent having a binding characteristic for binding an analyte, wherein the binding characteristic varies in a continuous gradient along one or more linear axes of the probe (see Fig. 8, sample 802).

Examiner interprets the language "wherein the probe is removably insertable into a laser desorption mass spectrometer" as a functional recitation of intended use of said probe. Examiner does not afford patentable weight to said language.

Claim Rejections - 35 USC § 103

Claims 34-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zare et al. (US 4,988,897) in view of Hutchens & Yip (WO 94/28418).

Zare et al. describe a probe a substantially described, *supra*, and incorporated herein. Zare et al. do not describe an anion exchange adsorbent, a cation exchange adsorbent, a hydrophilic adsorbent, a hydrophobic adsorbent, or a metal chalet adsorbent.

However, Hutchens & Yip describe an anion exchange adsorbent (see p. 78, line 6, "DEAE gel"), a cation exchange adsorbent (see p. 28, lines 24-25, "ionic (+/-) bonds... positively... charged groups on a protein surface"), a hydrophilic adsorbent (see p. 78, line 6, "DEAE gel") (see p. 28, lines 24-25, "ionic (+/-) bonds) (see p. 52, lines 13+), a hydrophobic adsorbent (see p. 78, line 16, "aminomethylated polystyrene"), and a metal chelate adsorbent (see p. 52, lines 13+).

Therefore, it would have been obvious for a person of ordinary skill in the art to modify the probe of Zare et al. by adding various adsorbent because Hutchens & Yip describe a probe wherein "analyte detection sensitivity (and dynamic range) is increased because molecular ionization suppression effects often observed with complex mixtures are eliminated" (see sentence bridging pp. 24-25).

Double Patenting

Claims 32-33 and 39-40 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 15 and 18 of US 5,719,060 in view of Zare et al. (US 4,988,897).

Claim 15 of US 5,719,060 recites a probe comprising a substrate ("sample presentation surface") having a flat surface ("presentation surface"), and an adsorbent ("affinity capture device") attached to the surface ("associated with said sample presentation surface").

Claim 15 of US 5,719,060 does not recite a probe having a binding characteristic that varies in a continuous gradient along one or more linear axes of the probe.

However, Zare et al. describe a probe having a binding characteristic that varies in a continuous gradient along one or more linear axes of the probe (see Fig. 8, sample 802).

Therefore, it would have been obvious for a person of ordinary skill in the art to modify the probe, as claimed in US 5,719,060, with the added limitation of a binding characteristic that varies in a continuous gradient along one or more linear axes of the probe because Zare et al. teaches that such a probe "can carry a plurality of samples simultaneously" (see col. 12, lines 31-33).

Claims 34-38 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 15 and 18 of US 5,719,060 and Zare et al. (US 4,988,897), as applied to claims 32-33, *supra*, and further in view of Hutchens & Yip (WO 94/28418).

Art Unit: 1641

Claims 15 and 18 of US 5,719,060 and Zare et al. recite a probe as substantially described, *supra*, and incorporated herein.

Claims 15 and 18 of US 5,719,060 and Zare et al. do not describe an anion exchange adsorbent, a cation exchange adsorbent, a hydrophilic adsorbent, a hydrophobic adsorbent, or a metal chalet adsorbent.

However, Hutchens & Yip describe an anion exchange adsorbent (see p. 78, line 6, "DEAE gel"), a cation exchange adsorbent (see p. 28, lines 24-25, "ionic (+/-) bonds... positively... charged groups on a protein surface"), a hydrophilic adsorbent (see p. 78, line 6, "DEAE gel") (see p. 28, lines 24-25, "ionic (+/-) bonds") (see p. 52, lines 13+), a hydrophobic adsorbent (see p. 78, line 16, "aminomethylated polystyrene"), and a metal chelate adsorbent (see p. 52, lines 13+).

Therefore, it would have been obvious for a person of ordinary skill in the art to modify the probe, as described in claims 15 and 18 of US 5,719,060 and Zare et al., by adding various adsorbent because Hutchens & Yip describe a probe wherein "analyte detection sensitivity (and dynamic range) is increased because molecular ionization suppression effects often observed with complex mixtures are eliminated" (see sentence bridging pp. 24-25).

Response to Arguments

In prior Office Action, claim 32-40 were rejected under 35 U.S.C. 103(a) as being unpatentable over Hutchens & Yip (WO 94/28418) in view of Vestal (US 5,498,545). In addition, claims 32-40 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 15 and 18 of US 5,719,060 in view of Hutchens & Yip (WO 94/28418) in view of Vestal (US 5,498,545). Applicants' claim amendments, argumentation, and demonstration performed during the interview of July 29, 2005, are fully persuasive and sufficient to overcome these rejections. Accordingly, these rejections are withdrawn.

Art Unit: 1641

Conclusion

No claims are allowed at this time.

The following prior art made of record, but not relied upon here, is considered pertinent to applicant's disclosure:

Wohlstadter et al. (US 6,207,369) are cited for their description of a "support" (see col. 15, lines 39-46) having covalent, electrostatic, hydrophobic, hydrophilic, biospecific, metal/ligand, and chelation "reagents" (see col. 12, lines 26-36) on the surface, relevant to claims 32-40.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David J. Venci whose telephone number is 571-272-2879. The examiner can normally be reached on 08:00 - 16:30 (EST). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on 571-272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

David J Venci
Examiner
Art Unit 1641

djv



LONG V. LE
SUPERVISOR
TECHNICAL CENTER 1641

10/31/05